Review

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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October 25, 2001

CERTIFIED RETURN RECEIPT
7099 3400 0016 8896 4462

Mr. Jon Showalter, Project Geologist
Cotter Corporation
P. O. Box 700
Nucla, Colorado 81424

Re: Initial Review of Notice of Intention to Revise Large Mining Operations, Cotter Corporation, Papoose Mine, M/037/084, San Juan County, Utah

Dear Mr. Showalter:

The Division has completed a review of your draft Notice of Intention to Revise Large Mining Operations for the Papoose Mine, located in San Juan County, Utah, which was received September 26, 2001. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. Please provide a response to this review by November 26, 2001.

The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. **Please address only the items requested in this review response or you may send replacement pages of the original notice using redline and strikeout, so we can see what changes have been made. After the notice is accepted, we will then ask that you send us two copies of the complete and corrected plan. Upon finalization of the permit, we will return one copy stamped "approved" for your records.** Please provide a response to this review by

The Division will suspend further review of the Papoose Mine NOI until your response to this letter is received. If you have any questions in this regard please contact me, Paul Baker or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
cc: John Blake, SITLA

REVIEW OF NOTICE OF INTENTION TO REVISE LARGE MINING OPERATIONS

Cotter Corporation
Papoose Mine

M/037/084

R647-4-104 - Filing Requirements and Review Procedures

The notice of intention contains the information required by this regulation. (PBB)

R647-4-104 - Operator's, Surface and Mineral Ownership

The operator has satisfied the requirements of this regulation. Both the surface and mineral rights are owned by the State of Utah. A letter in the file from the School and Institutional Trust Lands Administration (SITLA) indicates SITLA supports the proposal but indicates the operator needs to satisfy requirements of other regulatory agencies, such as the Division, before commencing operations. (PBB)

The Division has a copy of a cultural resource survey for the expansion area dated May 15, 2001, from La Plata Archaeological Consultants. They did not find any cultural resource sites. The Division has requested concurrence from the State Historic Preservation Office that the project will have no adverse effects on cultural resource sites.

R647-4-106 - Operation Plan

106.5 Existing soil types, location, amount

The NOI submitted in 1995 and the file contains information about the soils, but the NOI contains no new information. The area into which the operator intends to expand has very similar geology and vegetation compared to the current disturbed area, so the soils are likely to be similar.

The soils are very thin, usually less than six inches deep. About 20-30 percent of the area is covered with bare limestone. The one soil analysis in the file shows a sandy loam texture with a pH of 8.0 and an electrical conductivity value of 0.6. While nutrient values are generally low, these are typical for rangeland soils. Other than depth, the soil has no serious limitations.

While the Division considers this information to be adequate, the operator needs to consolidate the information into the NOI. (PBB)

106.6 Plan for protecting & redepositing soils

This is discussed in the portions of this review relating to operations and reclamation. (PBB)

106.7 Existing vegetation - species and amount

The mine area has a pinyon/juniper community with a very sparse understory of small shrubs and grass. The NOI submitted in May 1995 contains additional information about the nature of the community, including other species in the area. As with the soils information, the Division considers this adequate, but the information from the 1995

NOI needs to be included in the current application so there can be a complete package. (PBB)

R647-4-107 - Operation Practices

107.5 Suitable soils removed & stored

The text says only that the thin, sporadic topsoil will be stripped and stockpiled. Exhibit F-1 shows topsoil windrows on both sides of the existing disturbed area but does not show them in the proposed disturbed area. Exhibit F-2 is a cross section across the existing disturbed area and it shows a topsoil stockpile only on the uphill, northeast, side of the pit. Assuming the berm on the southwest side of the pit is topsoil, it should be marked on the cross section map.

The Division assumes the operator intends to continue making topsoil berms or windrows as it has in the past, and while this is acceptable, the berms should be shown on a map, such as Exhibit F-1.

The NOI does not indicate the stockpiled topsoil will be revegetated. The file contains a fax with a seed mix that is to be used for topsoil storage areas, but if this mix is to be used for interim revegetation, it needs to be included in the NOI. Alternatively, the operator could use the same seed mix for both interim and final reclamation. The NOI should specify any other methods to be used to stabilize the topsoil, such as roughening (highly recommended) and mulching. (PBB)

107.6 Concurrent reclamation

The NOI says the original plan called for concurrent final reclamation but that the need for extra space to stockpile different products and spare equipment has made this impractical. The operator is using reject fines material to backfill against the highwall on the northeast side of the property, and this backfilling is part of the plan for final reclamation. The operator should complete final reclamation in any areas that will not be used in the future, but the Division recognizes there are times when this is impossible at an active operation. (PBB)

R647-4-109 - Impact Assessment

109.2 Impacts to threatened & endangered wildlife/habitat

When the Division originally approved the NOI to expand this operation into a large mine, comments were received from the Division of Wildlife Resources through the Resource Development Coordinating Committee (RDCC) expressing concern about raptors that might be using the area. The Division responded to the RDCC that it would suggest that raptor surveys be done, but there is apparently no further information indicating whether there are raptor nests in the area. The operator should supply any information it has available. The area does not contain habitat for cliff nests, but some species, including ferruginous hawks, use pinyons and junipers for nesting. Therefore, there is some potential for adversely affecting these species.

The only other important habitat in the area of which the Division is aware is deer winter range. Although the pinyon/juniper areas near the mine would provide good cover, there is so little understory that there would be almost no forage available. Reclamation to something other than a pinyon/juniper community will benefit wildlife. (PBB)

R647-4-110 - Reclamation Plan

110.1 Current & post mining land use

The NOI needs to show the current and postmining land uses. The Division assumes the current and postmining land uses are wildlife habitat and grazing, but the NOI needs to contain a statement of the current land use and the proposed postmining land use for the disturbed area. (PBB)

110.5 Revegetation planting program

The NOI only has a few details of the revegetation plan. Available topsoil will be spread and scarified then seeded with the seed mix shown in the NOI.

The seed mix was suggested by the Division, including the two acronyms that should be specified (POAM—big bluegrass, and ELLA—thickspike wheatgrass). The species in this mix should provide good erosion control and wildlife and livestock forage.

The operator needs to state when the area will be seeded. Ideally, reclamation should be timed so seeding can be done in the fall, about mid-October, immediately after soil replacement and surface preparation.

Exhibit G shows a recommended rate for broadcast seeding with a footnote that the rate would be reduced one-third if the seed is drilled. While the rates are acceptable, there are several obstacles to drill seeding at this site and with this seed mix. The Division suggests the applicant simply broadcast seed either hydraulically or with a hurricane-type spreader. Otherwise, it would be necessary to use a combination of broadcast and drill seeding. (PBB)

R647-4-111 - Reclamation Practices

111.12 Topsoil redistribution

In the "Variances" section, the NOI discusses topsoil redistribution. This section contains an apparent typographical, but significant, error: it says 5 percent of the area will have topsoil applied. The bonding section and the operator's representative indicate the correct figure is 50 percent.

The Division has approved a variance allowing less than the entire area to be covered with topsoil. Approximately 50 percent of the area would be covered with twelve inches of topsoil, and no topsoil would be applied over the rest of the area. While this has been approved and is acceptable, the Division suggests the operator include two options in the reclamation plan. First, if the pit floor is basically bedrock, it would be best to use the current plan as it exists, even if the soil is in islands of deeper soil rather than being spread evenly. If, however, the pit floor contains a medium that could be used for

rooting, soil could be spread evenly over the entire area to a depth of about six inches. This would probably be much easier and less expensive than creating islands, but the method should not be used if there is less than about one foot of rooting medium under the soil.

The Division's files contain a September 6, 1995, letter from the operator committing to application of 40 pounds per acre of nitrogen and 60 pounds per acre of phosphorous fertilizer. This commitment needs to be included in the NOI.

The NOI indicates the soil will be scarified but gives no other details. The operator should include plans to decrease compaction in as much of the disturbed area as possible. Methods that might be used include ripping parallel to the contour and deep gouging. The soil surface needs to be left rough, and a method like discing leaves the surface relatively smooth and should not be used.

Remaining reject material resulting from sizing operations will be utilized during final reclamation for erosion control measures. If available, large rocks could be used for wildlife habitat either as individual rocks (large rocks) or in rock piles. In particular, it may be desirable to place rocks somewhat randomly at the base of the highwalls to control erosion, to benefit wildlife habitat, and to enhance the visual aspects of the reclaimed site.

The NOI says a few of the original trees will be scattered across reclaimed areas, but it should indicate how this will physically be done and what equipment would be used. It should be possible to use most of the trees if they are placed in several brush piles, and these would enhance wildlife habitat while helping to control erosion. (PBB)

R647-4-112 - Variance

The Division has approved a variance that allows the operator to spread soil on about half of the disturbed area. The exemption is not for topsoil salvage or revegetation. There is a limited amount of soil, but the operator will salvage what is available. According to the approved plan and the NOI, this soil will be redistributed in islands on the pit floor covering about 50 percent of the area. Depending on the conditions that exist at the time of reclamation, it may be both more economical and better for revegetation to distribute the soil evenly. This is discussed in the topsoil redistribution portion of this review. (PBB)

R647-4-113 – Surety

A draft copy of the reclamation estimate is attached. The disturbed area covered by this bond amount is the entire 47 acres outlined in the plan. (DJ)

Attachment: surety estimate

RECLAMATION SURETY ESTIMATE **DRAFT**

Cotter Corporation last revision **08/02/00**

Papoose Mine *filename M037-084.WB2*

M/037/084 (ML 45609) *San Juan County*

Prepared by Utah State Division of Oil, Gas & Mining

Located on lands administered by SITLA

DETAILS OF FINAL RECLAMATION

Pit highwalls (16 ft vertical height) will be backfilled to to a slope of 2h:1v or less, soiled, ripped & seeded.
Salvaged topsoil will be replaced to a depth of 12 inches on pit floors in "islands", fertilized, seeded and rip
All structure and debris will be removed within the pit area as the mine expands.
Disturbed areas that do not receive topsoil will not be fertilized or seeded.

Note: actual unit costs may vary according to site conditions ***last unit cost update*** 2-Aug-2000

-Amount of disturbed area which will receive reclamation treatments = 47.0 **acres**

-Estimated total disturbed area for this mine = 47.0 **acres**

Activity	Quantity	Units	$/unit	$	Note
Removal of structures and Debris	1	sum	500	500	(1)
Backfill against pit highwalls (7100 lf)	55,650	CY	0.50	27,825	
Spreading reject fines	4,800.0	CY	0.50	2,400	
Ripping access roads - dozer	0.5	acre	234	117	(9)
Culvert removal	2	each	300	600	
Topsoil replacement - dozer	37,500	CY	0.50	18,750	(12)
Topsoil ripping	23.5	acre	*234*	5,499	
Fertilizing	23.5	acre	*130*	3,055	*(00)*
Broadcast seeding	23.5	acre	*170*	3,995	*(00)*
General site cleanup & trash removal	23.5	acre	*100*	2,350	*(00)*
Equipment mobilization	2	equip	*1000*	2,000	*(00)*
Reclamation Supervision - 10% of total				6,709	
			Subtotal	73,800	
10% Contingency				7,380	
			Subtotal	$81,180	
Escalate for 5 years at 3.12% per yr				13,479	
			Total	$94,659	
	Rounded surety amount in yr 2006-$			**$94,700**	
Average cost per disturbed acre =	$2,015				

(1) DOGM lump sum assumed

(9) Means 2000 & Blue Book 3Q/00: Cat D8N, U, multi shank rippers, speed 1.0 mph
(12) Means 2000 & Blue Book 3Q/00: Cat D8N, U, mtl 2550 lb/CY, 100 ft push

(00) DOGM general estimate - fertilizing
(00) DOGM general estimate - broadcast seeding
(00) DOGM general estimate - site cleanup & trash removal

(00) DOGM general estimate - equipment mobilization